

DECLARATION OF JIM SUPICA

I, Jim Supica, under penalty of perjury, declare and state as follows:

1. I am over the age of 18, have personal knowledge of the facts and events referred to in this declaration, and am competent to testify to the matters stated below.

2. I am attaching a copy of my expert report in this matter as Attachment A, the contents of which are, to the best of my knowledge and belief, true and accurate. I hereby adopt and incorporate that report as if set forth fully herein.

3. I am qualified to provide expert testimony regarding the historical development of firearms in this matter. From 2008 to the present I have served as the Director of NRA Museums for the National Rifle Association of America. I oversee the operation of the NRA National Firearms Museum in Fairfax, Virginia and the NRA National Sporting Arms Museum in Springfield, Missouri. These are two of the top firearms museums in the country, with combined annual visitation currently averaging 280,000 to 410,000 people with conservation responsibility for approximately 9,950 firearms. Prior to my time as Director of the NRA Museums, I was President and founder of Old Town Station, Ltd., a federally licensed firearms dealer based in Lenexa, Kansas, selling antique and collectible firearms through national level auctions, mail order catalogs and websites. I have been an enthusiastic collector, student and researcher of firearms for over 30 years, winning numerous awards for educational firearms exhibits, speaking on firearms history, and actively participating in firearms collecting clubs and associations.

4. I am an NRA certified firearms instructor, and have had specific training in defensive use of firearms. I have written numerous articles and authored or co-authored nine books on firearms, and produced regular columns on firearms for national publications. I regularly appear as a firearms expert on television programs.

5. I have participated as an expert witness regarding firearms and the history of firearms in the Northern District of Illinois [*Friedman v. City of Highland Park*, No. 1:13-cv-9073]; in the District of Maryland [*Kolbe v. O'Malley*, No. 1:13-cv-02841] on January 6, 2014; and in the Chancery Division of the Circuit Court of Cook County, Illinois [*Wilson v. Cook County*, No. 07 CH 4848].

6. Firearms with a capacity of more than 10 rounds have been owned by civilians for centuries. An early firearm with a capacity of more than 10 rounds was available around 1580. This sixteen shot wheel-lock shot 16 rounds without reloading. Throughout the 17th and 18th centuries, many commercially available firearms had a capacity of more than 10 rounds, including the Kalthoff repeater which had up to a 30 shot capacity and the Belton repeating flintlock which had a 16 or 20 shot capacity. It cannot be disputed that the founders were very familiar with multiple shot repeating firearms at the time the Second Amendment was drafted. In 1777 the American Continental Congress ordered 100 of Belton's "new improved gun" which discharged eight rounds without reloading. Also, in 1777, Belton demonstrated a firearm with a 16 shot capacity to a commission appointed by Congress.

7. Commercially available firearms with a capacity of more than 10 rounds became even more widespread after the Second Amendment was ratified. For instance, Lewis and Clark took a Girardoni air rifle that fired 21 shots without reloading with them on their expedition and regularly demonstrated its repeating firepower to Native American tribes that they encountered. Pepperbox pistols, some of which could fire up to 18 shots before reloading became the predominant handgun design of the 1830s through the early 1850s. Pinfire revolvers, some offering as many as 21 shots without reloading, became widespread beginning in the 1850s. In 1860, the 15-shot Henry lever action rifle became fairly widespread and was used in the Civil

War. Between 1866 and 1900, Winchester produced approximately 880,000 lever action rifles with a magazine capacity in excess of ten rounds for the commercial market.

8. Semiautomatic firearms with detachable magazines have also been available and in wide use for well over a century. The 1880s saw the first prototypes of semiautomatic firearms through the adaptation of Winchester lever action rifles to self-load. In the late 19th century, semi-auto pistols with detachable box magazines were commercially available from multiple manufacturers. By 1910, multiple models of semi-auto rifles with detachable box magazines were offered on the commercial market by Winchester and Remington. By the 1930s, semi-auto pistols with detachable box magazines holding more than ten rounds were available, as were magazines holding more than ten rounds for semi-auto rifles.

9. Throughout history, advances in the development of individual firearms for military use and those for civilian use have for the most part been the same. The AR- and AK-platform rifles are no exception. Improvements in firearms technology tend to be adopted for both military and civilian use. Firearms designers and manufacturers have historically marketed new developments for both military and civilian uses. Soldiers who become familiar with a particular type of handgun or rifle in the service tend to seek out similar type firearms for personal use after leaving the military. Examples of firearms developments that were initially used in the commercial sector and later adopted by the military include repeating firearms (the U.S. Army stayed with single shot rifles for a quarter century after effective lever action repeaters were available), semiautomatic firearms, telescopic sights, detachable box magazines, pistol grip stocks on long guns, and double stack magazines. Examples of veterans bringing their preference for service arms home with them include the demand for breechloaders and revolvers following the Civil War, the movement from lever action repeaters to bolt action repeaters in the

hunting fields and the popularity of the 1911 pistol following WWI and WWII, and the preference for AR-platform rifles following Vietnam and other recent conflicts.

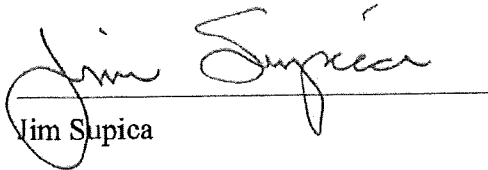
10. Today, the principal difference between military and civilian firearms is the capability for automatic fire. Fully automatic firearms are military firearms. Although some permit selective fire of a single round per trigger pull, their essential defining characteristic is that they are designed to fire multiple successive rounds with a single pull of the trigger. Most will continue firing for as long as the trigger is held back until the magazine is empty. Some have burst fire settings that will automatically fire a set number of rounds with each pull of the trigger (usually three rounds). Some are "select fire" meaning they can be set to either fire a single round per trigger pull, or fire full-auto or burst fire. They include machine pistols, sub-machine guns and machine guns. All are illegal for civilians to own under federal law unless they have been registered with and taxed by the Bureau of Alcohol, Tobacco, Firearms and Explosives ("ATF"). Their ownership is highly restricted under federal law.

11. By contrast, a semiautomatic firearm will fire only one round with a single trigger pull, the same as a single shot, double barrel, bolt action, pump action, lever action or revolving firearm. To fire a subsequent round, the trigger must be released and pulled again. These are not military-style firearms—they are civilian firearms. Although many semiautomatic rifles look like fully automatic rifles, they are functionally identical to other more traditional looking commercial semiautomatic rifles.

12. For most of American history, civilians owned the same firearms that were used by the military. For instance, from the Revolutionary War through WWI Americans owned the same muskets, flint-lock rifles, six-shooters, and bolt action rifles that were also used or issued by the military. It was the development of the automatic firearm that changed this, with

automatic firearms being largely reserved for the military and their semiautomatic versions being used by civilians. I know of no standing military force that issues semiautomatic rifles as their standard service rifle.

I declare under penalty of perjury that the foregoing is true and correct.


Jim Supica

Dec. 12, 2017
Date

EXPERT REPORT OF JIM SUPICA

SEPT. 15, 2017

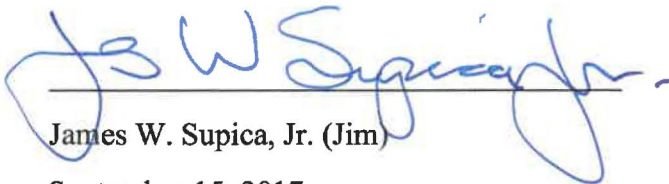
Director, NRA Museums

11250 Waples Mill Rd.

Fairfax VA 22030

703-267-1615

jsupica@nrahq.org



James W. Supica, Jr. (Jim)

September 15, 2017

My experience and expertise

From 2008 to present I have served as the Director of NRA Museums for the National Rifle Association of America. I oversee the operation of the NRA National Firearms Museum in Fairfax VA and the NRA National Sporting Arms Museum in Springfield MO. These are two of the top firearms museums in the country, with combined annual visitation currently averaging 280,000 to 410,000 with conservation responsibility for approximately 9,950 firearms. The NRA Museums also produce exhibits of firearms at other museums and temporary traveling exhibits.

I also oversee the NRAmuseums.com website (approximately 1.4 million page views annually) and the NRA Museum YouTube channel (over 600,000 views annually) and social media sites; along with book production and other media concerned with firearms history and education.

Prior to that, I was President and founder of Old Town Station, Ltd., a federally licensed firearms dealer based in Lenexa KS, selling antique and collectible firearms through national level auctions, mail order catalogs and websites from 1991 to 2008. I have been an enthusiastic collector, student and researcher of firearms for over 30 years, winning numerous awards for educational firearms exhibits, speaking on firearms history, and actively participating in firearms collecting clubs and associations. I am an NRA certified firearms instructor, and have had specific training in defensive use of firearms.

I have written numerous articles and authored or co-authored nine books on firearms, and produced regular columns on firearms for national publications. I regularly appear as a firearms expert on television programs.

A curriculum vitae is attached.

I am not receiving a fee in exchange for my opinions.

Material reviewed for this report

In addition to the sources cited herein, I have had access to the following material while preparing this report.

- M.G.L.A. 140 Section 121
- Complaint, Worman, et al. v. Baker, et al., Case 1:17-cv-10107-WGY
- Responses of Defendant Maura Healey, Aug. 3, 2017, Case 1:17-cv-10107-WGY
- AGO Enforcement Notice, July 20, 2016
- Defendant Col. McKeon's responses, Aug. 17, 2017, Civil Action 17-10107-WGY
- Responses of Defendant Daniel Bennett, Aug. 17, 2017, Case 1:17-cv-10107-WGY
- NSSF 2017 Edition Firearms Retailer Survey Report / Trend data 2008-2016
- Assault Weapons Ban Enforcement Q&A from A.G. Healy on mass.gov/ago/public-safety/awbe website
- Appendix A to 18 U.S.C. section 922
- Approved Firearms Roster 03-2017, Commonwealth of Massachusetts Executive Office of Public Safety and Security

REPORT

- 1) Throughout history, technological advances in firearms have focused on improving several specific factors. A central goal has been the ability to deliver multiple repeat shots on target as quickly as possible with minimal effort and disruption to the shooter.**

Additional important goals have included power adequate to the intended purpose, accuracy adequate to the intended purpose, safety for the shooter and for unintended targets, durability and ease of maintenance, and ergonomic improvements that make it easier for a shooter to safely and effectively use a firearm for its intended purpose including reducing size and weight to the extent possible while maintaining other desirable aspects. The guns that are restricted by this law tend to be ones that represent the current state of the art for many of these features.

These goals have been continuous throughout centuries of firearms development. The goals are sometimes conflicting. For example, a firearm that is too powerful for its weight will produce punishing recoil that may injure a shooter, or a gun may have such a large ammunition capacity that it becomes unwieldy and too heavy to carry or shoot comfortably and effectively. In the 14th through 17th centuries, the most significant developments in firearms design were in the form of ignition systems, evolving through hand cannon, matchlock, wheel lock, and various flintlock types of actions. Even during these primitive early years of firearms development, efforts were made to provide multiple shots without reloading, primarily through the addition of multiple barrels and sometimes multiple locks.

In the 17th, 18th and 19th centuries, double barrel muzzle-loading firearms provided a second shot available before reloading. This was fairly common in shotguns and pistols, less

common in rifles. Larger numbers of barrels were added less frequently, as the weight becomes cumbersome. Barrels were usually fixed, but some swivel barrels allowed multiple barrels to be sequentially fired with a single lock mechanism.

Another approach to successive shots during this era (and well beyond) was to carry multiple firearms. This is especially noted in handguns, where it was common to buy a cased pair of single shot pistols. The practice of carrying multiple firearms continues today.

However, as early as the late sixteenth century and continuing through the mid-nineteenth century, prior to the development of semi-auto firearms and detachable magazines, significant developmental effort in firearms design focused on the ability to fire multiple shots with minimal effort, minimal disruption of the firing position, and without reloading. Examples of both experimental and highly successful efforts in this regard, with approximate era of introduction, include:

- 1580 to 1590 -- sixteen shot wheel-lock. A single barrel firearm was developed that would fire sixteen shots without reloading. This was accomplished through superposed loads (each load stacked on top of previous loads in the same barrel), and was fired through the use of two wheel locks and one matchlock mounted on the gun. Only one specimen known.
- 1645 — Kalthoff repeater, made in both wheel lock and flintlock configurations. Each gun had two magazines, one for powder and one for lead balls. Eight shot capacity was standard, but at least one is reported with a 30 shot capacity. The time between shots for the flintlock version was reported as about one to two seconds. These were very expensive to make and saw limited production.

The Kalthoff is significant in that it used magazines mounted on the gun to contain powder and ball, rather than relying on multiple barrels or superposed loads in a single barrel.

Approximately 100 were issued to the Royal Foot Guards of Denmark and reportedly used in military combat as early as 1658. Private use also reported.

- 1750 — Cookson Volitional Repeating Flintlock, seven-shot capacity. This system was introduced in Europe as the Lorenzoni system around 1680, and variations were produced up through about 1850, as both pistols and rifles. Eleven and nine-shot variations are reported.

Like the Kalthoff, the Cookson and Lorenzoni guns utilized two internal magazines, one for gunpowder and the other for lead balls, which were fed alternately into two chambers with a loading lever. It took only a couple seconds to load a new charge between rounds. It was not as fast to fire successive shots as the Kalthoff, but was cheaper to produce. Limited production.

EARLY MULTIPLE SHOT FIREARMS



16-shot wheel lock, ca. 1590



7-shot Cookson repeating magazine fed flintlock, ca. 1750



12-shot Jennings multi-shot flintlock, ca. 1821

- 1777 — Belton repeating flintlock, multi-shot design, reported as firing "sixteen or twenty (rounds) in sixteen, ten, or five seconds of time." Very limited production. This gun fired superposed charges in a single barrel in a method similar to the sixteen shot 16th century wheel lock listed above. A single pull of the trigger fired all shots successively, in the manner of a roman candle.

Most notably, on May 3, 1777, the American Continental Congress ordered 100 of Belton's "'new improved gun' which will discharge eight rounds with once loading." The order was dismissed a few days later over a pricing issue. On June 16, 1777, Belton demonstrated a sixteen shot version of his musket to a commission appointed by Congress. Previous correspondence from Benjamin Franklin to George Washington on July 2, 1776, commented on an earlier Belton design, presumably his multi-shot swivel barrel.

Belton redesigned his system in 1784 to use a lock that could be manually slid backwards on the barrel after each shot, so that each trigger pull fired only one round. This was demonstrated to British Ordnance, who purchased the sample gun.

The founders were very familiar with multiple shot repeating firearms at the time the Second Amendment was drafted.

- 1795 — Girardoni air rifle, 21 shots .49 caliber, pneumatic power, enough force to penetrate a 1 inch plank or bring down a deer at 50 yards. Lewis & Clark took a Girardoni with them on their expedition and regularly demonstrated its repeating firepower to Native American tribes that they encountered.
- 1818 — Collier revolving flintlocks. Five shots in a manually rotated cylinder before reloading. Very limited production.
- 1819 — Hall Model 1819 U.S. breechloading rifle. The first breechloading U.S. military firearms, over 50,000 Hall action rifles were made through the 1850s.

The late 18th and early 19th century saw numerous efforts to develop a breechloading firearm, with the primary purpose of allowing a higher rate of fire from single shot firearms using the flintlock and percussion ignition systems. A breechloader can be loaded significantly faster than a muzzleloader. The Ferguson breechloading flintlock was introduced around 1775 and saw limited use by the British in the Revolutionary War. By the time of the American Civil War, several effective breech loading systems had been developed for percussion firearms. Probably the best known is the Sharps, with around 140,000 percussion specimens produced.

- 1821 — Jennings multi-shot flintlock rifle. Twelve superposed shots before reloading with a sliding lock similar to the earlier Belton design. Limited production. The U.S. Ordnance Department purchased 500.
- 1830s — Pepperbox pistols. Usually five or six shots before reloading, but capacities ranged from 3 to 18.

These repeaters used a rotating cluster of barrels. Since most were double action, they could be fired as fast as the trigger could be pulled. This became the predominant handgun design of the late 1830s through early 1850s.

- 1837 — Colt percussion revolver. Five or six shots without reloading. Cylinder advanced to next shot by cocking the hammer.

After a slow start, the percussion revolver became the predominant handgun design from the 1850s through early 1870s, with around a million produced by Colt alone, and many more by other manufacturers. Some variations had higher capacity, such as the double barreled LeMat revolver which held nine pistol rounds plus one shotgun charge.

While percussion revolvers usually offered six quick shots, reloading the cylinder was a time consuming and laborious process. Some models, such as the Remingtons, could quickly exchange an empty fired cylinder for a pre-loaded cylinder in much the same way that later semi-auto firearms can be reloaded by replacing an empty magazine with a loaded one.

Another approach was to carry multiple revolvers. A pair carried on the person was not uncommon, and during the Civil War era armed men might carry four or more revolvers on horseback.

- 1837 -- Colt ring lever rifle. Eight to ten shots without reloading, using a revolver action similar to the Colt handguns. Limited production.
- 1838 — Bennett & Haviland many chambered rifle. Twelve shots in individual chambers manually rotated into place. Very limited production. Other experimental firearms of the era included similar chain guns with up to 100 shot capacity.

The 1830s through 1850s saw a number of repeating revolving rifle and shotgun designs introduced. Some were the Colt pattern utilizing parallel chambers in a cylinder and others used the turret system with a disk magazine with chambers arranged like the spokes of a wheel

- 1839 — Colt revolving shotgun. Six shots before reloading, same principal as Colt revolving handgun. Limited production, around 1,300 total for Models 1839 and 1855.
- 1850s — Hall percussion revolving rifle. Colt type cylinder with 15 shots. Very limited production.
- 1850s — Porter revolving turret rifle. Lever action percussion rifle with 38 shot capacity with canister magazine attached. Very limited production.
- 1850s — Pinfire revolvers. Mostly six shot, but some as many as 24 shots. Widespread production by various makers.

More popular in Europe than the U.S., the pinfire system used a self-contained metallic cartridge, and remained in use through most of the rest of the 19th century. Most pinfire handguns were double action revolvers, meaning this gun could be fired as fast as the trigger could be pulled.

- 1855 — Volcanic type lever action pistols and rifles. Up to ten rounds in a pistol and up to thirty rounds in a rifle, fed by working a lever from a tubular magazine under the barrel before reloading. Limited production of 5,000 to 10,000.

EARLY MULTIPLE SHOT FIREARMS



12-shot Bennett & Haviland many-chambered rifle, ca. 1838



8-shot Porter Turret rifle, ca. 1850s
An earlier 38 shot cannister magazine fed model was also produced.



18-shot Mariette pepperbox pistol, ca. 1840s-1850s



21-shot pinfire revolver, ca. 1870s



Multiple barrel flintlocks
top - 4 barrel pocket pistol, one shot at a time, ca. 1820s
bottom - Nock Volley Gun, 7 shots all at once, ca. 1805



21-shot Girardoni air rifle, ca. 1795



Up to 30 round Volcanic lever action rifle, ca. 1855

- 1857 — Smith & Wesson Model One. Seven shot .22 revolver. One of the earliest widely successful repeating handguns to use a self-contained metallic cartridge. Over 250,000 made through 1881.

The development of self-contained metallic cartridges allowed rapid development of increased capacity repeating firearms. The predecessor percussion system generally required three separate components — gunpowder, bullet and primer. Metallic cartridges combined these into a single discrete unit held together in a brass or other metal casing.

The cartridge revolver became the predominant handgun from the 1870s through the mid-20th century, and is still widely popular today.

- 1860 — Henry lever action rifle — Fifteen shot lever action with tubular magazine under the barrel. 14,000 made. Used in the Civil War. Predecessor of the Winchester lever action rifles.
- 1860 — Spencer repeating rifle — Seven shot with tubular magazine in the buttstock. Over 144,000 made. Used in the Civil War.

Loading tubes for Spencers contained seven rounds to be quickly and easily inserted into the magazine, to foreshadowing the development of replaceable magazines for quick reloads. The various sizes of Blakeslee cartridge boxes issued by the federal government could hold seven, ten or thirteen of these seven-round loading tubes.

- 1866 — Winchester Model 1866 lever action rifle — Seventeen shots in a tubular magazine. Over 170,000 manufactured.
- 1869 — Roper revolving shotgun. Four shots with a revolver mechanism. One of the earliest repeating shotguns utilizing self-contained shotshells. Limited production.
- 1873 & 1892 — Winchester Models 1873 and 1892 lever action rifles. Most hold twelve to seventeen rounds in a tubular magazine. Combined production of over 1.7 million made by 1941.

Lever action rifles such as those by Winchester, Marlin, and others were the predominant repeating rifles in America from the 1870s well into the 20th century. They are quick for repeat shots, requiring only the down stroke and return of a lever to be ready to fire the next round, and relatively high capacity. Capacity of tubular magazines is limited by the length of the tube and barrel. Accordingly, guns with longer, higher powered, cartridges will have lower capacity than those firing shorter less powerful cartridges in most cases. Tubular magazines are generally not appropriate for the spitzer (pointed) bullets used in most modern rifle cartridges today. Millions of lever action rifles have been produced and are still being produced today. With practice, skilled shooters can fire multiple rounds nearly as fast as a semi-auto rifle.

- 1873 — Evans lever action rifle. 34 to 28 round capacities made possible by helical magazine in buttstock. Limited production.
- 1877 — Colt model 1877 Double Action revolver. Six rounds. Over 166,000 produced.

This model represents the double action revolver system, which allows successive shots as fast as the shooter can pull the trigger. It had been available in the percussion era, such as the Civil War vintage Starr revolver, and had gained popularity in Europe before

catching on in the U.S. However, by the turn of the 20th century, the faster firing double action system had replaced the single action as America's preferred handgun.

- 1884 — Mauser Model 1871/84 bolt action rifle — Eight round tubular magazine. An early successful repeating bolt action rifle. Close to a million produced.

While the lever action repeating rifle was predominant in America, European armies were adopting bolt action rifles in the late 19th century. Early examples of military single shot bolt actions include French Chassepot needle-fires 1866, Austro-Hungarian Wemdl and Wanzl rifles 1866, Swiss & Italian Vetterli 1869, German M. 1871 Mauser, Dutch Beaumont 1871, French Gras 1874, and Japanese Murata 1880.

Repeating bolt action rifles followed soon after, using either tubular or fixed box magazines. Many of the early examples were modifications of earlier single shot models. Examples include Austro Hungarian Kropatschek 1878, Swiss Vetterli 1878, French Lebel 1886, Austrian Mannlicher 1886, German Commission rifle 1888, British Lee Metford 1888, Dutch Beaumont Vitali 1888, Danish Krag-Jorgensen 1889, and Swiss Schmidt-Rubin 1889.

The U.S. military experimented with bolt action rifles, including the Model 1871 Ward Burton; Model 1879 Winchester-Hotchkiss, Models 1879 through 1899 Remington-Lees, Remington-Keene (1880), and Model 1882 Chaffee Reese. However the first bolt action to become widely issued was the Krag, Models 1892, 1896 and 1898, with over 400,000 produced. It was the first widely issued repeating rifle for the U.S. military since the Civil War.

Most of these models were also made for the civilian market.

- 1889 — Colt Model 1889 Navy revolver — Six shot double action swing out cylinder revolver. 31,000 made, but millions upon millions of the general type have been manufactured since.

This model represents the earliest widely popular swing-out cylinder revolver of the type that is predominant today. These guns can be fired as fast as the shooter can pull the trigger. Most are five or six shots, but can go up to eight rounds or more. They became the most popular American handgun type through at least the first half of the 20th century and remain widely popular today. They can be fired as fast as a semi-auto pistol, but are slower to reload. Because of this, sometimes a 2nd revolver is carried as a backup gun.

- 1898 — Mauser Gew 98 bolt action rifle. Five round box magazine. Millions of this pattern produced.

The Model 98 Mauser is widely considered to represent the perfection of the fixed magazine bolt action repeating rifle design. It formed the basis of the U.S. Springfield Model 1903 bolt action rifle which served through World Wars I & II. It represents a trend of this general type of rifle adopted by militaries around the world at the turn of the century and used through WWII. They take full advantage of the ballistic improvements in power and long range accuracy made possible by smokeless powder and spitzer bullets.

A few bolt action rifles were made with extended capacity magazines or detachable box magazines, such as the twenty round trench magazines made for the U.S. Springfield

Model 1903. Both bolt action and semi-auto rifles with fixed or semi-fixed magazines are often designed to be reloaded using stripper clips or en bloc clips, which, with practice, can offer as fast a reload as a detachable magazine.

Source for most dates, production numbers and capacities in opinion 1: Flayderman's Guide to Antique American Firearms and Their Values, 9th Edition, by Norm Flayderman. Additional sources include American Military Shoulder Arms, Vol. 1, George D. Moller; Arms and Armor in Colonial America 1526-1783 by Harold L. Peterson, The Book of the Gun by Harold L. Peterson, American Military Shoulder Arms, Vold, by George D. Moller, Firearms Curiosa by Lewis Winant, The Winchester Book by George Madis, Mausier Military Rifles of the World 4th Edition by Robert W.D. Ball, Rifles of the World by John Walter, Blue Book of Gun Values by S.P. Fjestad, and Illustrated History of Firearms by Supica, Wicklund and Schreier.

2) Semi-automatic firearms with detachable magazines have been available and in wide use for over a century.

In the late 1800's, significant efforts in firearms development focused on developing "self-loading" firearms that would utilize some of the energy developed by the firing of the cartridge to load a subsequent round into the chamber ready to fire. Firearm systems prior to this time had relied on some mechanical effort by the shooter to load successive rounds into the firing chamber, such as manipulating the bolt, lever or pump on a repeating long gun; cocking the hammer on a single action revolver; or using the mechanical effort exerted on the trigger pull of a double action revolver to advance the next round in the cylinder into firing position.

The new types of firearms were initially called "self-loading" or "auto-loading" firearms. Either term accurately describes their function. Earliest models were often called "automatic pistols". They later came to be called "semi-automatic" or "semi-auto" to distinguish them from "automatic" or "full-auto" firearms.

The distinction between semi-auto and full-auto is vitally important to understand.

Full-auto firearms are machine guns. Although some permit selective fire of a single round per trigger pull, their essential defining characteristic is that they are designed to fire multiple successive rounds with a single pull of the trigger. Most will continue firing for as long as the trigger is held back until the magazine is empty. Some have burst fire settings that will automatically fire a set number of rounds with each pull of the trigger (usually three rounds). Some are "select fire" meaning they can be set to either fire a single round with per trigger pull, or fire full-auto or burst fire. They include machine pistols, sub-machine guns and machine guns. All are illegal to own under federal law unless they have been registered with and taxed by the BATFE. Their ownership is highly restricted under federal law.

By contrast, a semi-auto firearm will fire only one round with a single trigger pull, the same as a single shot, double barrel, bolt action, pump action, lever action or revolving firearm. To fire a subsequent round, the trigger must be released and pulled again.

The usage of semi-auto firearms goes back well over a century.

The 1880s saw the first prototypes of semi-auto firearms through adaptation of Winchester lever action rifles to self-load. In 1883 Hiram Maxim captured the force of recoil to perform the function and in 1889 John Moses Browning used the expanding gases of the burning gunpowder to the same end. The Danish military experimented with a semi-auto rifle in the same era. The earliest semi-auto firearms to see actual production were pistols, initially sold to the civilian market.

Some significant developments in semi-auto firearms include:

- 1893 — Borchardt semi-auto pistol. Eight round detachable box magazine. A few thousand were made, primarily for the civilian market. The Steyr Schoenberger semi-auto pistol was introduced a year earlier, but was not commercially successful.
- 1894 — Steyr/Mannlicher and Bergmann semi-auto pistols. Due to the Borchardt patent on the detachable magazine in the grip, the former used a fixed magazine loaded through the top, and the latter a detachable magazine mounted forward of the triggerguard. Limited production, primarily for civilian market.

Both Steyr/Mannlicher and Bergmann followed with more successful designs, introduced between 1896 and 1908 with substantial commercial success. In the early decades of the 20th century the semi-auto pistol rapidly became a widely popular European handgun for both military and civilian sales, and was produced by a number of manufacturers.

- 1896 — Mauser C96 "broomhandle" semi-auto pistol. Fixed magazine, top loaded by stripper clips. Standard capacity is ten rounds, but different models hold six to twenty rounds. Highly successful in both civilian and military markets, produced through the late 1930s.
- 1899 — Luger semi-auto pistol. Detachable box magazine, typically 8 rounds, with 32 round drum magazine also available. Highly successful and produced in large numbers for both civilian and military markets. Adopted by many militaries, most notably Germany as the Model P-08. Highest popularity was 1908 through the 1940s, but variations were produced as late as the 1990s.
- 1900 — Colt Model 1900 semi-auto pistol. Seven shot detachable box magazine. This begins a series of full size Colt semi-auto pistols including Models 1900, 1902 and 1905 with seven to eight round magazines. Larger capacity magazines were also offered by the Colt factory. These early Colt full-size pistols were replaced in the Colt line by the Model 1911.
- 1902 — Browning Auto 5 shotgun production begins. Semi-auto, tube magazine. Variations of this design have been produced through 1990s by FN, Browning, Remington, Savage and Franchi. Semi-auto shotguns are widely popular for hunting, competition and personal defense.
- 1903 — Colt Model 1903 Pocket semi-auto pistol. Seven shot detachable box magazine. This begins a series of Colt "pocket pistols", including Model 1903s, Model 1908s, and Model M's, all introduced prior to 1909, with detachable magazines with capacities of six to eight rounds. They were very popular with over 1.1 million produced before they were discontinued in the 1940s, nearly all for the commercial market.

- 1905 — Winchester Model 1905 takedown semi-auto rifle. Five or ten round detachable magazine. Approx. 31,000 produced.

This is one of the first in a string of successful centerfire semi-auto civilian rifles introduced by major American manufacturers in the first decade of the 20th century, including:

- Winchester M. 1907, five or ten round detachable magazine, 59,000 made.
- Winchester M. 1910, four round detachable magazine, 20,700 made.
- Remington Model Eight (1906), four round detachable magazine with 20 round available, 60,000 made.

Their intended use and popularity for hunting is indicated by the numerous paintings created for firearms advertisements of the period featuring these semi-auto rifles in hunting situations. Larger capacity magazines for all these models were offered by the factories and from after-market suppliers.

- 1903 — Mondragon semi-auto rifle developed. The Model 1908 has an 8 round box magazine and Model 1915 has a 30 round detachable drum magazine. Generally considered the first successful military semi-auto rifle. Limited production, but adopted by Mexican army in 1911. Used by Germany in aerial combat in WWI. Aprox. 4,000 produced.
- 1907 — Savage Model 1907 semi-auto pistol. "Pocket" sized pistol with ten round detachable box magazine, one of the first successful semi-autos to use a "staggered" or "double stack" magazine. Over 280,000 Savage "pocket pistols" of various models were sold to commercial market before they were discontinued in the 1920s.
- 1911 — Colt Model 1911 semi-auto pistol. Seven round detachable magazine.

Officially adopted by the U.S. military in 1911, and still in use for some military applications today, this pattern is possibly the most produced American pistol, and was likely the most popular full size semi-auto through much of the 20th century in America. Many millions have been made by many manufacturers, and it is still one of the most popular civilian handguns.

- 1917 — French MAS & MAT Models 1917 & 1918 semi-auto rifles. Five shot fixed magazine. French military, first widely used military semi-auto rifle.
- 1935 - Browning Hi Power semi-auto pistol. Thirteen round detachable double stack magazine. One of the most widely used military pistol designs in the mid to late 20th century, and likely the 2nd or 3rd most popular full size semi-auto pistol civilian pistol in the U.S. in the 1940s through 1970s.
- 1936 — U.S. M1 Garand semi-auto rifle loaded by eight round en bloc clip that automatically ejects after last round fired. The first semi-auto rifle to see extensive satisfactory military usage. Total production estimated over six million.
- 1941 — U.S. M1 Carbine semi-auto rifle. Standard 15 or 30 round detachable box magazine. Over 6.5 million produced for military use; popular with shooters as military surplus, and commercial variations available.

The M1 Carbine was introduced to provide a weapon for military personnel whose primary duties were not infantry related. It was intended to be smaller, lighter, and handier than a full size rifle such as the M1 Garand or the M1903 Springfield, but more powerful and effective than a handgun such as the M1911 pistol.

While the vast majority of M1 Carbines were fixed stock and semi-auto, full auto select fire and folding stock variations were also made.

In using an intermediate power cartridge midway between full powered rifle rounds and handgun rounds, it foreshadowed the development of true military assault rifles such as the AK-47 and M16.

- 1943 — Sturmgewehr (StG) 44 full-auto military assault rifle. Thirty round detachable box magazine.

Introduced by Germany in WWII, this is generally considered the first true assault rifle, and is the arm from which the name arises, "sturm" generally interpreted as "storm" or "assault" and "gewehr" as "gun" or "rifle."

Prior to the StG 44, there were two main types of individual shoulder-fired military firearms used in the WWI through WWII era.

a) The rifle which fired a full-power rifle round in the 30-06 or 8mm Mauser class that could be effective out to 600 yards and beyond. These were bolt action or semi-auto, and fired one round per trigger pull. The semi-auto versions are also known as "battle rifles."

b) The sub-machine gun that fired low-powered rounds generally considered to be pistol-type rounds which rapidly become less effective beyond 100 yards or so. These are select-fire or full-auto guns that generally fire multiple rounds so long as the trigger is held back, and are intended primarily for close range combat.

The assault weapon is intended to fire intermediate power rounds that will be powerful enough to be effective out to the 300 yard ranges that are generally considered adequate for most modern warfare applications, yet offer mild enough recoil to be able to be fired full-auto for close-in combat.

- 1949 — AK-47 select fire full-auto military assault rifle, designed by Mikhail Kalashnikov (AK stands for Avtomat Kalashnikova). Thirty round detachable box magazine standard.

Observing the effectiveness of the StG 44 in WWII, the Soviet military set about developing its own assault weapon. The resulting AK-47 is considered to be extremely reliable in all conditions, and this pattern has become the most produced military firearm in history. Estimates of total Kalashnikov pattern firearms in existence run over 100 million.

Production of true AK-47s stopped in 1959. Subsequent similar Russian military models have included the AKM and AK-74. Despite this, most long guns built on this basic design are still referred to as "AK-47 types" or "AK's" or "Kalashnikovs".

Beginning in the late 1970s semi-auto copies of the AK type rifles became widely popular in the U.S. and remain popular today. They are likely the 2nd most popular type of centerfire semi-auto rifle, behind AR-15 types.

- 1957 — U.S. M14 select fire full-auto military rifle. Twenty round detachable box magazine. Nearly 1.4 million made.

After WWII, the U.S. sought a successor to the M1 Garand that would use a detachable box magazine rather than an en-bloc clip, would fire a cartridge of similar power to the Garand & 1903's .30-06, and would be capable of select-fire (i.e., could be fired single shot or full-auto). The result of a five year test was the adoption of the M14, based on the M1 Garand pattern. It fired a full power cartridge, the 7.62x51mm NATO round, similar to the commercial .308 Winchester round. In service it was found to be difficult to manage in full-auto firing with this full power cartridge.

In 1974 Springfield Armory, Inc., began offering a semi-auto only version of this rifle as the Model M1A. It gained immediate popularity with civilian shooters including target competition, and continues to be popular.

- 1963 — U.S. M16 select fire full auto military rifle. Twenty round detachable magazine standard. Thirty round magazines also adopted in 1969.

Even as the M14 was being adopted in 1957, the U.S. Army began searching for a .22 (centerfire) caliber lightweight select fire rifle. Since the mid-1950's Armalite had been developing gas-operated rifles that differed substantially from traditional wood stock designs in the use of modern materials and ergonomics. An AR-10 version was developed for the 7.62x51mm cartridge by 1956. The "AR" designation stood for "Armalite Rifle." In response to the military specifications, a similar scaled down AR-15 select fire rifle for the .223 Remington (5.56x45mm) cartridge was developed. The Air Force adopted the select fire AR-15 in 1962. As adopted by the Army in 1964 and manufactured by Colt, it was renamed the M16. The AR-15 name was later recycled by Colt for semi-auto only versions of this rifle.

The M16 is a true "assault rifle" — select fire, shoulder fired, intermediate cartridge, detachable magazine. Variations continue in service today, and it is second only to the AK type assault rifles as the most widely used military rifle pattern today.

- 1963 — Colt SP-1 semi-auto rifle. Twenty round detachable box magazine.

Later widely known as AR-15's and other model designations, the SP-1 was a semi-auto civilian version of the military M16 select-fire rifle. The AR-15 has become the most popular civilian rifle design in America, and is made in many variations by many companies.

- 1971 — Smith & Wesson Model 59 semi-auto pistol. Fourteen round double stack detachable magazine.

The Model 59 was the first U.S. made full-size double stack semi-auto to become widely popular, primarily in the civilian market. It was also the first double action semi-auto to use a double stack magazine. This general style by a number of manufacturers was widely popular through the 1970s and 80s, and remains popular today.

- 1976 — Beretta Model 92 semi-auto pistol. Fifteen round double stack detachable magazine.

In 1985 the M9 version of this pistol became the standard U.S. military issue sidearm. The Model 92 and similar pistols are widely popular.

- 1986 — Glock 17 semi-auto pistol — Seventeen round double stack detachable magazine

The introduction of the Glock was most notable for its use of non-metallic polymer plastic-like material for construction of the frame, although other pistols had used similar materials in the past. It also introduced a variation in action type called "safe-action" which varied from the traditional single action or double action.

It developed a reputation for reliability and ease of use. The Glock is today probably the most popular handgun type for civilian use, including police use. It has been estimated that perhaps as many as 2/3 of U.S. police departments use the Glock.

The general pattern of semi-auto pistol with a double stack magazine, as represented by the S&W Model 59, Beretta Model 92, and Glock 17, has become the most popular full size centerfire handgun type. It is made by many companies in many variations. The most common standard magazine capacities are 13 to 17 rounds. It is also a very popular style for compact pistols, with standard capacities reduced corresponding to size.

Sources for opinion 2: International Armament by George B. Johnson and Hans Bert Lockhoven, Standard Catalog of Military Firearms 6th Edition by Phillip Peterson, Rifles of the World by John Walter, Blue Book of Gun Values 34th Edition by S. P. Fjestad, Standard Catalog of Firearms 23rd Edition by Jerry Lee, Flayderman's Guide, Standard Catalog of Smith & Wesson 3rd Edition by Jim Supica and Richard Nahas, Gun Digest 68th Edition by Jerry Lee, The Winchester Handbook by George Madis

- 3) Throughout history, advances in the development of individual firearms for military use and those for civilian use have for the most part been the same.** Improvements in firearms technology tend to be adopted for both military and civilian use. Firearms designers and manufacturers have historically marketed new developments for both military and civilian uses. Soldiers who become familiar with a particular type of handgun or rifle in the service tend to seek out similar type firearms for personal use after leaving the military.

Examples of firearms developments that were initially used in the commercial sector and later adopted by the military include repeating firearms (the U.S. Army stayed with single shot rifles for a quarter century after effective lever action repeaters were available), semi-automatic firearms, telescopic sights, detachable box magazines, pistol grip stocks on long guns, and double stack magazines.

Examples of veterans bringing their preference for service arms home with them include the demand for breechloaders and revolvers following the Civil War, the movement from lever action repeaters to bolt action repeaters in the hunting fields and the popularity of the 1911 pistol following WWI and WWII, and the preference for AR pattern rifles following Vietnam and other recent conflicts.

4) The guns restricted by this law are not true "assault weapons" in the original meaning of the term.

"Assault rifle" originally had a specific definition that applied only to a specific type of full-auto firearm, initially developed towards the end of WWII. Its defining characteristics are: a) select fire — can be fired single shot or full- auto (or burst fire) as determined by setting a selector switch; b) shoulder-fired; c) detachable magazine; d) chambered for an "intermediate cartridge" with a power level midway between a traditional high-power military rifle round such as the .30-06 and a traditional pistol class round such as the .45 ACP or 9mm. These true assault rifles are strictly regulated by federal law, the same as other machine guns.

They are differentiated from "battle rifles", which fire full power cartridges in the 30-06 class, and which have been made in both semi-auto and select-fire configurations.

The terms "assault rifle" and "assault weapon" have been commonly but incorrectly applied to semi-auto firearms that cosmetically resemble true military assault rifles, as is the case with the law in question.

The vast majority, probably all, of the world's military forces utilize true full-auto or select-fire "assault rifles" as their primary-issue military shoulder arm.

Some specialized military units may utilize semi-automatic rifles for special uses, such as sniper rifles. However, in these special uses, the cartridge is most often a full-power round rather than the intermediate round used in classic military "assault rifles."

During the mid-20th century when true assault rifles were being developed, firearms designers were also introducing other improvements that were not related to the assault rifle function, but which were included on them. These include:

- The use of improved materials, such as plastic or other synthetic stocks replacing traditional wood stocks and increased use of aluminum and other lightweight alloys.
- Use of more efficient manufacturing techniques, such as stamped metal parts replacing forged metal parts.
- Improved ergonomics such as pistol grip separate from stock, stock design that directs recoil straight into the shoulder instead of creating muzzle flip, and raised sights to allow effective aiming with the more straight stock design.
- Adjustable stocks that made the firearm more easily and safely usable by various sized shooters.
- Folding stocks that facilitate easier storage and transport.

The semi-auto only rifles that are built on "assault rifle" patterns tend to incorporate these improvements, but are functionally identical to other more old-fashioned looking commercial semi-auto rifles.

At this point, understanding the power level of various types of cartridges is very important in understanding various types of firearms and their uses. It is important not only for understanding the history of firearms development, but also for understanding the pluses and

minuses of various types of firearms that might be used for personal defense. Too little energy can result in rounds that are ineffective. Too much can result in over-penetration and excessive recoil.

One of the best and most common ways of expressing the power of a particular cartridge is muzzle energy: the kinetic energy of the projectile at the moment it leaves the barrel, expressed in foot-pounds of force based on the weight of the bullet and it's velocity.

The following table shows the muzzle energy of various classes of rounds and their typical applications. Caveats:

- They same cartridge will typically have slightly greater muzzle energy when fired from a long gun than from a handgun.
- Muzzle energy for a particular cartridge will vary based on the specific load used. Information below is based on some of the most common used loads.
- General ranges of muzzle energy for a particular class of cartridge are shown rather than for a specific cartridge. The goal is to show the typical difference in power levels between commonly used types of firearms such as handguns, intermediate power rifles, and high power rifles. Muzzle energy shown has been rounded, and is for the most common types of factory made ammunition as listed in Cartridges of the World 10th Edition by Frank C. Barnes. Muzzle energy can usually be increased & decreased a bit by custom hand loading.

Cartridge type	Examples	Muzzle energy range	Common uses
Rimfire handgun & rifle	.22 LR	120-190 ft-lb	Plinking, target, small game, practice
Handgun	.38 Special, 9mm, .40 S&W, & .45 ACP	240-465 ft-lb	Defense, military, target
Magnum revolver	.357 Magnum	410-580 ft-lb	Defense, med.-small game hunting.
Large magnum revolver	.44 Magnum	730-1,040 ft-lb	Hunting
Intermediate power rifle - M1 carbine	.30 Carbine	880-970 ft-lb	WWII military carbine.
Intermediate power rifle - AR type	.223 Rem. (5.56x45 NATO)	1,180-1,380 ft-lb	Defense, military, target, "varmint" hunting.
Intermediate power rifle - AK type	7.62x39	1,450-1,550 ft-lb	Defense, military
High power rifle	.308 Win. (7.62x51 NATO)	2,200-2,700 ft-lb	Military, big game hunting, target.
High power rifle	.30-06, 8mm Mauser	2,700-3,000 ft-lb	Big game hunting, WWI & II military rifle

5) The guns restricted by this law do not represent a radical departure from the traditional functions of firearms. The types of firearms banned by this law are commonly used for lawful purposes, notably self defense and target competition, by responsible individuals.

Semi-auto firearms with detachable standard capacity magazines holding more than ten rounds are probably the most popular types of rifles and pistols for personal and home defense.

The ability to have as many rounds as needed to end the threat is essential in self-defense use of firearms. It is reported that in a majority of self defense situations, the mere display of a firearm may be enough to deter aggression with no shots needing to be fired. However, if shots must be fired, the number needed is not so simple as one shot for each aggressor. The high stress situation of a self defense shooting is not conducive to careful marksmanship, and many rounds may miss. Also, it is not certain that a single hit on an aggressor will end the threat posed. The self defense shooter must have enough rounds to safely resolve the attack, and there is no guarantee that ten rounds will be enough.

Changing reduced capacity magazines is awkward and time-consuming in a legitimate self-defense shooting situation, putting the defender in jeopardy compared to a defender using a standard capacity magazine. This is especially true for defenders who may not have trained extensively, who have physical handicaps or other limitations, or are in a highly stressed state due to sudden lethal assault.

True self-defense situations can evoke extreme emotional and physiological reactions in the defenders. Adrenaline dump results in loss of fine motor skills. It's true that extensive practice can result in very fast magazine changes, but few individuals who are forced to use firearms in self defense have developed that type of expertise.

The mental focus and physical manipulations required to change magazines in a high stress situation can lead the defender to forget or ignore usual safety rules, possibly creating risk of accidental shooting of innocent bystanders or the defender.

Also note:

- a) The capacities of standard capacity magazines for pistols have developed over the years as firearms and ammunition design has advanced. In all cases for defensive use, more rounds before reloading are considered better than fewer rounds if all other things are equal. A number of developments in recent decades have allowed an increase in the number of rounds held by a standard capacity magazine. These include improved grip designs, improvements in ammunition design, and development of new cartridges.
- b) AR and AK type semi-auto rifles are especially desirable for many self defense situations. A rifle is always easier to shoot accurately than a handgun.

The .223 round typically used in an AR type rifle has special self defense benefits compared to other rifle rounds. It is generally more effective in stopping an aggressor with a single properly placed shot than most handgun rounds. However, unlike full power rifle rounds in the .308 and .30-06 class, it is much less likely to over-penetrate

endangering unintended individuals. Its lower recoil also makes it much more manageable than high power rifle rounds.

- c) The guns restricted by this law have features that may make them easier and safer to use by small statured individuals (including some women and ethnic groups), the elderly, and disabled individuals. These include:
- Pistol grip stocks on long guns allowing for a more accurate and natural shooting position and better control and retention of the gun.
 - Straight line stocks on long guns, reducing muzzle climb, allowing the shooter to more easily stay on target, and making the gun less punishing on small statured shooters.
 - A greater number of shots before reloading (see a. above).

- d) AR type rifles are the predominant firearms used in the most popular types of rifle target competition. The NSSF Report Sport Shooting Participation in the United States in 2012 on page 19 indicates that "17.4% of all U.S. residents went target or sport shooting" in 2012, and of those, 33.5% used a "modern sporting rifle."

Each summer the national shooting championships are held at Camp Perry Ohio. These include the NRA National Pistol and Rifle Championships and the Civilian Marksmanship Program (CMP) National Trophy matches. Camp Perry is widely considered "the World Series of target competition."

The NRA matches have been conducted since 1871, and have been held at Camp Perry since 1907. AR-15 type rifles first began to see significant use at Camp Perry matches in the late 1980s, and have since become the predominant type of rifle at the matches. Both NRA and CMP matches are traditional target style matches using aimed shots from a fixed position at paper targets at a known range.

By far the most popular matches are the service rifle matches, which are shot nearly exclusively with AR pattern rifles, primarily AR-15 type rifles. Of the registered shooters at the 2012 NRA Camp Perry National Matches, 89% competed in the service rifle match, far more than in any other type of competition there.

Likewise, in the CMP matches, the matches using AR15 type rifles have by far the most participants. AR-15 type rifles are used nearly exclusively in CMP's President's 100 Trophy Match, National Trophy Individual Match, and National Trophy Team Match.

In addition to traditional target shooting, various types of action shooting competition have become widely popular in the past few decades, including three gun matches. In the action shooting matches where rifles are used, AR15 types are the most popular.

- e) Previous attempts to regulate magazine or firearm ammunition capacity have resulted in unintended consequences. When consumers are restricted to a magazine capacity of ten rounds or less, they are more likely to choose a compact firearm which is more difficult to effectively fire accurately than a full size pistol. Inaccurate shots mean the defender is more likely to hit an unintended target.
- f) A flash suppressor can be considered a safety device on a rifle intended for self-defense. To the extent that it serves its defined function ("a device that functions, or is intended to

function, to perceptibly reduce or redirect muzzle flash from the shooter's field of vision"), it protects the defensive shooter from being temporarily blinded by muzzle flash, especially at night or in a darkened environment. By doing so it would allow the defensive shooter to:

- i) Ascertain whether the threat to his life has been neutralized
 - ii) Ascertain whether there are additional assailants to address, to make accurate successive shots if required
 - iii) Avoid accidentally shooting at family members or other innocent bystanders with successive shots through misidentification
 - iv) Visually identify law enforcement officers responding to the shooting to avoid firing on them by accident or being perceived as a threat by them.
- 6) **The guns and magazines restricted by this law are among the most popular for private ownership and many offer significant advantages in safety and effectiveness, included effectiveness for use in personal defense, over other non-restricted designs and reduced-capacity magazines.**

The guns restricted by this law are all designed to fire a single round of ammunition with a single pull of the trigger to hit an intended target. They are no more dangerous in this regard than any other type of firearm. Many of them include features that make them safer for the user and innocent bystanders than other types of firearms.

The guns and magazines restricted by the law include some of the most popular types for self defense and target competition usage.

Firearms manufacturers and importers respond to consumer preferences. One way to assess this is to look at the models offered to the public. Gun Digest is an annual publication that includes a listing of most models of firearms offered in the U.S. retail market, with photos of most of them. It is a good snapshot of available new firearms at the time of publication, and is currently in its 71st Edition as edited by Jerry Lee.

Looking at the list of prohibited rifles specifically listed in this law and trying to guess what features are considered offensive is not easy, but most of them are centerfire semi-autos capable of accepting detachable magazines with capacity more than ten rounds, and a modern style stock that has a distinct pistol grip as distinguished from the old style stocks. Let's call these "modern style rifles."

Of the rifles on the "Prohibited Assault Weapons" list, all rifles appear to fit this description. With that as the criteria, a review of centerfire ("CF") rifles pictured in various editions of Gun Digest reveals the following:

<u>Gun Digest</u> year	CF rifles pictured	Non-semi- auto CF rifles	Total semi-auto CF rifles	Modern style semi- auto CF rifles	Modern style as % of all CF rifles	Modern style as % of all semi- autos
1970	74	62	12	3	4%	25%
1980	99	80	19	10	10%	53%
1990	135	97	38	28	21%	74%
2000*	175	158	17	12	7%	71%
2010	201	147	54	40	19%	74%
2014	204	148	58	45	22%	77%
2017	176	118	58	45	25%	77%

** The 2000 Edition was published during the "Federal Assault Weapons Ban" years 1994 to 2004.*

This suggests that the type of rifles this law restricts have comprised a substantial portion of the available commercial models for a quarter century. What it does not necessarily show is how popular these types of guns are compared to other rifles. Some of the rifles pictured in Gun Digest are for very specialized markets and applications, and do not necessarily sell in large numbers.

The NSSF Firearms Retailer Survey Report (2013 and 2017 editions) and the Modern Sporting Rifle Comprehensive Consumer Report 2013 by the same organization may be the best available attempts to quantify the numbers and uses of the types of rifles this law bans. The former surveys firearms dealers, and the latter surveys modern sporting rifle owners.

Below are the results of the NSSF 2017 retailer survey for the years 2008, 2012, and 2016 for the question:

"Out of every 100 firearms you sell, approximately how many are:"

- Semi-auto pistol — 43.0%
- AR / modern sporting rifle — 17.9%
- Traditional rifle — 11.3%
- Shotgun — 11.5%
- Revolver — 8.6%
- Muzzleloader — 3.8%
- Other -3.9%

This suggests that AR / modern sporting rifles of the type this law bans are the most popular types of rifles with the American buying public. This is especially significant when one considers that the traditional rifle class includes a wide range of types of rifles such as traditional semi-autos, bolt-actions, lever-actions, single shots, and pump-actions. It also

shows the semi-auto pistol is significantly more popular than the revolver. It is an easy assumption that the greater standard capacity of many pistols is part of the reason.

Page 10 of the same document reports firearms dealer responses to the question "Of your annual firearm sales, please report the percentage you think were sold primarily for hunting purposes, target shooting purposes and personal-protection purposes." The latest 2012 data shows the following responses (590 to 606 dealers responding to each question):

2016 Percent	Shotguns	AR-style / modern sporting rifles	Rifles	Handguns
Sold for hunting purposes	41.0%	22.9%	68.3%	7.2%
Sold for target / informal shooting	24.1%	47.1%	24.0%	33.4%
Sold for personal protection purposes	34.9%	30.0%	7.7%	59.5%

This indicates that the types of rifles banned by this law are the clearly preferred choice of a buyer seeking a rifle for personal defense.

It also indicates the primary purpose for purchasing a handgun is personal protection.

Clearly the types of guns and magazines banned are exactly the type commonly used by responsible individuals for lawful purposes such as self-defense.

7) The law is confusing and internally contradictory.

- a) In trying to discern the purpose of this law, it appears that it may be an attempt to restrict the number of rounds a gun can fire quickly without reloading. If that is the case, there are some common firearms that are not restricted by this law that send a greater number of potentially lethal individual projectiles and/or more foot/pounds of energy downrange in a shorter time than some of those that are banned (based on a fully loaded firearm without reloading).

Semi-auto and some pump action sporting shotguns loaded with buckshot will send more individually lethal projectiles downrange faster than a semi-auto rifle or pistol with a 15 or 20 round magazine. A high powered hunting rifle will send more foot pounds of energy downrange quicker than a semi-auto long gun with a 20 round magazine of 9mm or .45 acp ammunition. A pair of eight shot .357 Magnum revolvers will send more rounds and more foot pounds of energy downrange faster than a semi-auto 9mm pistol with a standard capacity 15 round magazine.

- b) The law is inconsistent because there are guns that are functionally identical to the banned guns, but which are exempt from the ban because of purely cosmetic features.

One example is the Ruger Mini-14 rifle. It is functionally identical to an AR-15 type rifle in that it has a semi-automatic action, accepts detachable magazines, and uses the same .223 or 5.56 cartridge. However, it is not banned because it has a more conventional appearing wood stock than that on AR-15 pattern rifles.

Other examples are the many semi-auto copies of the Thompson sub-machine gun. These semi-autos have detachable magazines, but do not have two of the banned features.

Yet another is the U.S. M1 carbine, both military surplus guns and commercial copies.

- c) The list of specific features used to define a "semiautomatic assault weapon" (folding stock, pistol grip, bayonet mount, flash suppressor, grenade launcher) have no bearing on the likelihood that a rifle will be used for criminal purposes. To the extent that they offer any tactical advantage or disadvantage, that advantage or disadvantage applies equally to the legitimate self-defense user as well as to criminals.

A folding stock does not substantially increase the concealability of a rifle for criminal use. With the legal minimum 16" barrel, either a folding stock or non-folding stock rifle is roughly equally concealable only under a long outer garment, but not reasonably concealable on an individual without outerwear. Firing a long gun with a folding stock in the folded position only serves to greatly increase the chances that the shooter will miss the intended target.

As previously discussed, pistol grips aid in accurate and safe shooting. As to indiscriminate criminal use, it is actually more difficult and uncomfortable to shoot a rifle equipped with a pistol grip "from the hip" than to shoot a rifle with a traditional wood stock in that manner.

The potential benefits of a flash suppressor in a legitimate self-defense situation have been discussed above, but the actual impact would nearly always be minimal. One would be hard pressed to find any incident where a grenade launcher or mounted bayonet have been used in a criminal venture in the United States in the past century.

- 8) The definition of "Copy or Duplicate" provided in the Enforcement Notice of July 20, 2016, is so broad as to potentially ban all semi-auto firearms, and so complicated that it is impractical or impossible for most individuals to apply. It also uses meaningless terminology that has no accepted definition in relation to firearms.**

- a) The *Similarity Test* states in part "... a weapon is a Copy or Duplicate ... if the operating system and firing mechanism of the weapon are based on or otherwise substantially similar to one of the Enumerated Weapons."

There is no standard definition for a firearm's "operating system." Construed broadly it could be considered the type of action mechanism, for example, lever-action, pump-action, semi-automatic, revolver, or single-shot. Under that application of "operating system," all semi-auto firearms could be banned. It's possible that a case could be made for banning revolvers, since the banned revolving cylinder shotguns use that type of operating system.

Sometimes "operating system" is used to describe the general application of physics and mechanics that causes a semi-automatic firearm to function. Primary types would

include direct gas impingement, gas piston, blowback, and recoil operated. The specific guns enumerated on the banned list use three out of four of these types of "operating systems," suggesting that a majority of all semi-automatic firearms would fall within the ban.

I am aware of no narrower definition of "operating system" that would lessen the impact of that statement.

Likewise, there is no standard definition of "firing mechanism." Similar language is sometimes used when describing hammer fired vs. striker firearm guns, or single action vs. double action guns. In general, the "firing mechanism" of a gun could be considered to be the basic controls — i.e. a trigger that in some manner releases a firing pin to ignite the primer of the cartridge. In that sense, all firearms have the same "firing mechanisms" as the specific banned guns.

- b) The *Interchangeability Test* attempts to provide a complicated formula to define whether a gun's receiver is "the same as or interchangeable with the receiver of an Enumerated Weapon." It goes on to list five "operating components," indicating that if any two of them are interchangeable with those of an Enumerated Weapon, the gun in question would be considered a banned Copy or Duplicate.

It is interesting to note that one of the listed components, "the magazine port," is not a term that is generally used in describing firearms. One could speculate that this might mean the magazine well, the opening into which a magazine is inserted, or the ejection port, the opening through which empty brass cases are ejected. If either of those is the intention, the inclusion of this term still doesn't make sense, since both are nearly always part of the receiver and not separate components.

Of further serious concern in the *Interchangeability Test* is the notation that the interchangeable "operational components" (which is yet another term with no meaningful definition when applied to firearms) "include but are not limited to" the five that are specifically listed. Is a screw, a simple pin, or a spring an "operational component" if it is necessary to make a gun function? If so, the definition rapidly becomes so broad as to be meaningless.

A final serious flaw to the *Interchangeability Test* is that it is extremely difficult if not impossible for anyone other than a firearms manufacturer or skilled gunsmith to apply. The vast majority of potential gun owners, and likely a majority of federally licensed firearms dealers, do not have the skill or resources to detail strip examples of each of the nine Enumerated Weapons to compare the components for interchangeability with those of a firearm whose banned status is unknown.

Semi-automatic Firearms

Colt AR-15 - banned

20 or 30 rd. std. mag
5.56 mm (.223 Rem.) cartridge
1,200 ft/lbs energy per round



Ruger Mini-14 - permitted

10 or 30 rd. std. mag
5.56 mm (.223 Rem.) cartridge
1,200 ft/lbs energy per round
Identical performance to AR-15



Springfield Armory M1A -permitted

20 rd. std. mag
7.62 mm (.308 Win.) cartridge
2,500 ft/lbs energy per round
Same capacity as AR15
Twice as powerful as AR15



M1 Carbine - permitted or banned?

20 or 30 rd. std. mag
.30 carbine cartridge
900 ft/lbs energy per round
Higher capacity than Uzi
More than twice as powerful as Uzi



IMI Uzi A carbine - banned

20 or 32 rd. std. mag
.9mm cartridge
350 ft/lbs energy per round
Less powerful than M1 Carbine or Thompson



Auto-Ordnance Thompson - permitted or banned?

20, 30, 50 or 100 rd mag
..45ACP cartridge
400 ft/lbs energy per round
More powerful than Uzi
Higher capacity than Uzi available



All examples are widely produced semi-automatic rifles with detachable magazines.
Magazine replacement time is comparable for all examples.
Standard magazine capacity is listed. Other capacities may be available for most.
Muzzle energy listed is a middle range of common commercial ammunition

Jim Supica (James W., Jr.)

Curriculum Vitae

EMPLOYMENT

NATIONAL RIFLE ASSOCIATION OF AMERICA (NRA) Director

of NRA Museums, 2008 to present.

- Title changed from Director of National Firearms Museum and Gun Collector Programs in 2013.
- Direction and management of the NRA National Firearms Museum in Fairfax VA, est. 1935, which is recognized as one of the leading firearms museums in the world. It's annual visitation of 40,000 to 50,000 has approximately doubled during my tenure.
- Direction, installation, thematic design, and ongoing supervision of exhibits for the NRA National Sporting Arms Museum, in Springfield MO, opened August 2013. It is the most visited firearms museum in the country, with annual visitation around 240,000 to 300,000.
- Direction and management of the NRA Museums' media outreach which includes magazine articles, regular and guest appearances in various television programs, and book publication.
- Supervise electronic media outreach including the NRAmuseum.com website which tallies 1.4 to 2.7 million page views per year and ranks #1 on Google for both "Gun Museum" and "Firearms Museum," NFMcurator YouTube channel with 600,000 to 1.6 million views per year, and the Museum's Facebook page with an annual total of daily reaches of 31 to 50 million.
- Supervise staff of seven full-time curatorial and administrative personnel, plus others. Oversee conservation of and regulatory compliance for approx. 10,000 firearms valued at over \$40 million.

Old Town Station, Ltd.

Owner and President, national level antique and collectable firearms retailer, 1992 to 2008

As a federally licensed firearms dealer, sold antique and collectable firearms via mail order catalog, website and live auctions. Wrote, photographed, laid-out and published 54 issues of Old Town Station Dispatch, which combined illustrated listings of old firearms for sale with historical gun information and tips for collectors.

Developed and directly implemented and maintained ArmchairGunShow.com website, which combined firearms information with listing of collectable firearms for sale. When the website was sold in 2008, Google rankings were: #1 for Gun Collector, Old Firearms, Antique Pistol; #2 for Gun Values, Old Guns, Historic Firearms; #3 for Collectable Guns, Collectable Firearms; #4 for Antique Firearms; #14 for Gun Info; #17 for Gun Safety; and #26 for Guns.

Kull & Supica Firearms Auction

Principal and auctioneer for national level firearms specialty auction house, 2001 to 2008.

Conducted national-level cataloged live firearms auctions. Produced the catalogs including firearms research, description, photography and layout. Worked as co-auctioneer. Developed and managed the Armsbid.com website, which Google regularly ranked #1 on the internet for "Live gun auction" and "Live firearms auction."

United Construction Co., Inc.

Vice President and Legal Counsel, 1980 to 1992.

Heavy and highway construction firm working in Kansas, Missouri and Oklahoma. Annual volume of \$5 to \$20 million with 50 to 100 employees. Administrative, supervisory, strategic planning and legal work. Legal emphasis on administrative, contract claims, regulatory compliance, and corporate law.

Headquarters, Inc., Crisis

Center Director, 1975 to 1977.

Managed United Way service agency providing 24/7 telephone hotline, walk-in, and outreach crisis intervention and suicide prevention services, along with drug abuse programs. Direct supervision and training of 6 paid and 40 to 80 part time volunteer staff members. Resigned to attend law school.

Part-time during high school and college

Heavy construction laborer, newspaper delivery driver, KU Information Center phone staff, Douglas County Court Diversion Program counselor.

EDUCATION

University of Kansas School of Law, Juris Doctorate, 1980

Attorney, admitted to practice in Kansas and United States courts, 1980-present

(inactive) University of Kansas, B.A. Psychology, 1977

PUBLICATIONS

Books

- Standard Catalog of Smith & Wesson by Jim Supica and Richard Nahas; Editions 1 through 4, 1997, 2001, 2006 and 2016. Gun Digest Books.
- Guns of the NRA National Sporting Arms Museum, by Jim Supica, Doug Wicklund and Philip Schreier, 2017, Blue Book Publications.
- Treasures of the NRA National Firearms Museum by Jim Supica, Doug Wicklund and Philip Schreier, 2013, Chartwell Books, Inc. 50,000 copies in print.
- Illustrated History of Firearms by Jim Supica, Doug Wicklund and Philip Schreier, 2011, Chartwell Books, Inc. 144,000 copies in print. Believed to be the best-selling gun book of all time.
- Guns Rifles Shotguns by Jim Supica, 2015, TAJ Books International
- Handguns by Jim Supica, 2010, Thunder Bay Press
- Rifles by Jim Supica and Doug Wicklund, 2010, Thunder Bay Press
- Shotguns by Jim Supica and Philip Schreier, 2010, Thunder Bay Press
- Guns introduction by Jim Supica, 2005, **TAJ Books, Ltd.**

Columns

- "I Have This Old Gun," American Rifleman — monthly column, in rotation with other writers, 2005 to 2008
- "Ask the Gun Guy," Shotgun News — monthly column, 2000 to 2008

Contributing Editor

- American Rifleman, 1996 to 2009. Included co-writing "Dope Bag" column
- Standard Catalog of Firearms, 9th through 20th Editions, 1999 through 2010

Articles and Chapters

- "Intro to Gun Collecting," 3 part series, Sporting Classics Daily and NRA Blog, 2016
- "A Brief History of Firearms," 10 part series, NRAblog.com, 2016
- "When old attitudes shoot down new innovations in U.S. weaponry," Washington Times, Feb. 28, 2014
- "NRA National Sporting Arms Museum," Soldier of Fortune, Feb. 2014
- "Your NRA National Firearms Museum," The Texas Gun Collector, Fall 2012
- "Fine Arms and Fine Art," Blue Book of Gun Values, 32nd Ed., 2012
- "100 Years of the M1911," American Rifleman, Nov. 2011
- "The NRA National Sporting Arms Museum," American Society of Arms Collectors Bulletin No. 111
- "The Fort Worth Experience," Texas Gun Collector, Spring 2011
- "Confessions of an Unrepentant Accumulator," Ohio Gun Collector Assoc., 2010
- "NationalFirearmsMuseum.org," America's First Freedom, Nov. 2009
- "Donating Confiscated Firearms," NRA Law Enforcement Quarterly, Spring 2009
- Foreword, Smith & Wesson American Model by Charles Pate, 2006
- "How to be a Gun Collector," Standard Catalog of Firearms
- "How to Ship Guns and Ammo," 2006 Standard Catalog of Firearms
- "Gun Auction Buying Tips," 2006 Standard Catalog of Firearms
- "Collecting S&W Model 3 Revolvers," 2005 Standard Catalog of Firearms
- "The State of Collecting," 2004 Standard Catalog of Firearms
- "Is a Collectors License for You?," 2002 through 2005 Standard Catalog of Firearms
- Preface, History of Smith & Wesson Firearms by Dean Boors, 2002
- "The Last Twenty Years in Gun Collecting," Blue Book of Gun Values 20th Ed., 1999
- "Fake!" Blue Book of Gun Values, 19th Ed., 1998
- "Engraving & Gun Values," Standard Catalog of Colt Firearms, 2007
- "Firearms Engraving," Insights, March 1998
- "Guns on the Auction Block," Blue Book of Gun Values 18th Ed., 1997
- "Collecting S&W," with Richard Nahas, American Rifleman, April 1997
- "Pieces of History — A Proposed Rating System for Historically Attributed Firearms," Blue Book of Gun Values, 16th & 17th Ed's., 1995 & 1996, and elsewhere.
- "A Brady Retrospective," CADA Gun Journal, Nov. 1995
- "Living with Brady," Blue Book of Gun Values, 15th Ed., 1994
- "Baby Hammerless Revolvers," Man at Arms, Jan/Feb. 1994

- "In my Experience — Affordable Collectables," American Rifleman, Feb. 1994
- "The Brady Crunch," CADA Gun Journal, Jan, 1994
- "Condition Condition Condition Baloney!," CADA Gun Journal, Jan. 1994
- "SWCA 1993 Annual Meeting," Smith & Wesson Journal, 1993
- "Antique or Not Antique," CADA Gun Journal, Dec. 1993
- "Quincy 1992," Smith & Wesson Journal, 1992
- "Three Lives of a Schofield," CADA Gun Journal, 1992
- "Cuban New Model Number Threes," Smith & Wesson Journal, 1991

Recorded media

- "American Guns," Mill Creek Entertainment, DVD & Blue Ray, 2017.
- Featured lecturer, American Gunsmithing Institute Certified Firearms Appraiser Course, CD & DVD, 2012.

Publisher, photographer, and writer - Old Town Station Dispatch, issues #1 through 54, 1991-2008.

Acknowledged Contributor

- Blue Book of Gun Values by S.P. Fjestad, annual editions, 1992 through present.
- Flayderman's Guide to Antique American Firearms and their Values by Norm Flayderman, 6th, 7th, 8th, & 9th Editions; 1994 through 2007.
- Complete Guide to United States Military Combat Shotguns by Bruce N. Canfield, 2007
- S&W Sixguns of the Old West by David Chicoine, 2004
- Old Guns and Whispering Ghosts by Jesse Wolf Hardin, 2006
- 331 Tips and Tricks — a How-to Guide for the Gun Collector by Stuart C. Mowbray, 2006.

TELEVISION

Appeared as a firearms expert on over 200 national television episodes, including:

Co-Host:

- "NRA Gun *Gurus*," Outdoor Channel and NRA TV, 2014 to 2016
- "Guns and Gold," Sportsman Channel, 2011 to 2013

Regular guest expert:

- "Gun Stories, with Joe Mantegna" Outdoor Channel, 2011 to present
- "American Rifleman Television," "I have this old gun" segment, Outdoor Channel, 2006 to present
- "NRA News," "Curator's Corner" segment, Sportsman Channel, 2013 through 2015. Same segment on Cam & Co. webcast and Sirius radio, 2008 to present
- "History of Guns in America" — Centre Communications, 2016
- "NRA All Access" — Outdoor Channel, 2014-2016
- "Cowboys," Outdoor Channel, 2009

Single or multiple episode appearances:

- "After Newtown — Guns in America," PBS, 2013
- "Triggers," The Military Channel, 2013
- "101 Weapons that Changed the World," the History Channel, 2013
- "American Artifacts," CSPAN3, two episodes, March 9 & 16, 2014
- "Mysteries at the Museum," Travel Channel, Dec. 12, 2014
- "United Stuff of America — American Firepower," History Channel, June 21, 2014
- "Top Guns of the Wild West" — American Heroes Channel in conjunction with "Gunslingers" series. Six episodes. 2014.
- "Shootout Lane," Outdoor Channel, April 2015
- Network affiliate local broadcast programs in Washington DC, Kansas City, Tulsa, Tucson, Springfield MO and others
- Numerous guest appearances on local and regional radio program, including Guntalk radio, The Outdoor Guys radio, Outdoor World radio, Lonestar Outdoor Show
- Firearms consultant, "Legends and Lies," Fox News Channel, 2015
- "A House Divided," Fullscreen Media, Fall 2016

MEDIA REFERENCES:

Interviewed for, quoted in, and/or pictured in numerous publications, including:

- Referenced 58 times on firearms-related topics on Wikipedia.
- We the People by Ben Philippi, 2016
- "Deconstructing the anti-2nd Amendment Musket Myth," NRA Blog & Ammoland News, 2016
- "S&W Recent Value Trends," Gun Digest, Oct. 18, 2016
- "DC Travel Guide Rejects NRA Museum Ad," Washingtonian & Fox News, Aug. 8, 2016
- "Nazi Assault Rifle," CNN Money, June 29, 2016
- "Industry Support 2016 NRA Annual Meeting," Shooting Industry, May 2016
- "Up in Arms," Villanova School of Law Journal, April 1, 2016
- "Concealed Carry Gun," CNN Money, March 21, 2016
- "Museum in NRA Headquarters," Washingtonian magazine, Oct. 9, 2015
- "Just Asking" feature interview, Washington Post Magazine, May 24, 2015
- "History of Firearm Magazines," by David B. Kopel, Albany Law Review, March 17, 2015
- Outdoors Hub, monthly cover stories by Kristine Houtman, 2015
- "The Story of Guns in America," Wall Street Journal, Sept. 2, 2014
- "National Firearms Museum," Recoil Magazine, Issue 11, 2014
- "Off the Beaten Path," Washington Times, June 17, 2014 "NRA Convention," USA Today and Indianapolis Star, Apr. 25, 2014
- "Mikhail Kalashnikov Dies," Washington Post, Dec. 23, 2013
- Cover story, America's First Freedom, Oct. 2013
- "NRA Museum Opens," Huffington Post, Aug. 4, 2013

- "New NRA Museum," Foxnews.com, Aug. 4, 2013
- "NRA Opens Midwest Museum," Reuters, London Free Press & others, Aug. 3, 2013
- Cover story, Ohio Gun Collectors Association, Summer 2013
- "The First Gun in America," NPR, Apr. 6, 2013
- "Mitchell's Model 98K", American Rifleman, Feb. 2012
- "The Case for Caselessness: The Volcanic Rifle," guns.com, Apr. 19, 2011
- "What's Your Gun Worth?" Human Events, May 11, 2010
- "Keeping Your Gun Collection Safe," America's First Freedom, Oct. 2009
- "Top Ten Handguns," American Rifleman, Sept. 2009
- "The Other Shoe Drops," Massad Ayoob on Guns, Feb. 2009
- "Why You Need This Catalog," American Handgunner, July/Aug. 2006
- "Collectibles," Guns & Ammo, Oct. 1995
- "Insights with Jim Supica," CADA Gun Journal, March 1994
- "Trigger Talk," Shooting Times, July 1993
- Michelle Malkin column on AOL banning gun pages, ca. 1992
- "Rigid Quotas in Minority Hiring" by Howard Kurtz, Washington Post, Jan. 23, 1986.
- "Bureaucratic Nightmare Cited," New York Times, March 3, 1986
 - o Reprints or variations of these two articles also appeared in Wall Street Journal, Houston Chronicle, Oakland Tribune, LA Daily Journal, Philadelphia Inquirer, LA Herald Examiner, and Washington Times.
- Full page or double page photo ads for NRA Gun Gurus TV Show, Guns & Ammo, Apr. 2014, pgs. 48 & 49; May 2014, pg. 94; June 2014, pg. 43; July 2014, pgs. 42 & 43; Aug. 2014, pgs. 48 & 49
- Double page photo ads for NRA Guns & Gold TV Show, Guns & Ammo, Jan. 2013, pgs. 36 & 37; Bowhunter, Dec./Jan. 2013, pgs. 58 & 59; Virginia Fish & Game, Dec./Jan. 2013, pgs. 10 & 11; Handguns, Feb./Mar. 2013, pgs. 58 & 59.

OTHER FIREARMS RELATED ACTIVITIES

Training

- NRA Certified Instructor — "Pistol" and "Personal Protection in the Home," 2004-present.
- Kansas Concealed Carry Instructor, 2007-2010.
- Defensive shooting training: Chapman Academy (Ray Chapman), Lethal Force Institute (Masad Ayoob), Jim Cirillo.
- Reserve Police Officer, Shawnee KS, early 1980's.

Gun show participation — Attend half a dozen to a dozen or more gun shows every year for the past 25 years, usually as an exhibitor, and prior to 2008 as a commercial dealer. Educational exhibits of personal collection have won 20 national level awards, including:

- First person to be awarded both of the highest educational awards offered by NRA, the Gun Collectors Committee Trophy (1996), and the Andrew E. Mowbray Educational Trophy (1997).
- S&W Collectors Association Calhoun Norton Award (Best of Show)

- Missouri Valley Arms Collectors Association Best of Show (1992)
- Texas Gun Collectors Association First Place (1993)
- Indian Territory Gun Collectors Association First Place.

Guest speaker — Guest speaker on firearms and gun collecting topics for numerous events and groups since the early 1990's, including:

- McFaddin-Ward House speaker series, "Guns of Texas," Nov. 2017 (scheduled)
- Cody Firearms Museum "Arsenals of History" Symposium, July 2017
- Trinidad State Junior College "Art of the Gun" Seminar, June 2017
- Remington Society of America, 2016 Annual Meeting
- Aspen Institute seminar, "Firearms and the Common Law," Sept. 15, 2016
- Professional Outdoor Media Association annual banquet, 2015
- Great American Outdoor Show, 2014 & 2015
- American Society of Arms Collectors
- NRA National Gun Collector Leadership Seminars, 1996-2000
- NRA National Gun Show & Conferences
- **NRA** Annual Membership Meetings
- Smith & Wesson Collectors Association Annual Meetings
- Dallas Arms Collectors Association Meeting, 2005
- Texas Gun Collectors Association Annual Banquets
- Ohio Gun Collectors Association Annual Banquets, 2003 & 2009
- Missouri Valley Arms Collectors Association Meetings, 1991-2005
- National Firearms Museum VGCA Speaker Series, 1998

Auctioneer — Graduated Missouri Auction School, 1992. Conducted national level live firearms auctions 1993-2008. Regularly donated bid-calling services to conduct fund-raising auctions for firearms related groups including:

- S&W Collectors Association
- Friends of NRA
- Texas Gun Collectors Association
- National Firearms Museum

EXPERT WITNESS & CONSULTING

- Worman, et. al. v. Baker, et. al, US District Court for the District of Massachusetts, expert opinion on assault weapon and magazine ban, 2017.
- Kolbe v. Hogan, US Supreme Court, Cited in Cato Institute Amici Curiae brief, 2017
- Cody Firearms Museum Design Review Panel, 2017.
- J.M. Davis Foundation, Inc. v. State of Oklahoma — Site visit, consultation and expert witness regarding operation of a firearms museum, 2013-2017.

- Wilson, et al. v. County of Cook, IL — Disclosure and deposition regarding Blair Holt Assault Weapons Ban, 2013.
- Friedman and the Illinois State Rifle Association v. City of Highland Park — Affidavit and supplemental affidavit regarding city ordinance on assault weapons, 2013. Cited in SCOTUS amicus brief 2015.
- Tardy v. O'Malley — Expert witness opinion & deposition on Maryland assault weapons ban, 2013

MEMBERSHIPS

National Rifle Association of America — Benefactor Member.

- Board of Directors, 2001-2008.
- Vice Chairman Gun Collector Committee, 2007-2008
- Chairman, Publications Policy Committee, 2008 S&W

Collectors Association — Board of Directors. Life Member.

- President 2003-2005
- Distinguished Member Award 2015

Missouri Valley Arms Collectors Association

- President 1993 & 1995.
- First Honorary Life Member.

Colt Collectors Association — Board of Directors, 2001-2003

American Society of Arms Collectors — Member

Kansas State Rifle Association — Life Member

Single Action Shooting Society — Life Member

National Congress of Old West Shooters — Life Member

Other gun collecting memberships, current or past — Smith and Wesson Historical Foundation, Buffalo Bill Historic Center, Ohio Gun Collectors Assoc., Winchester Collectors Association, Winchester Arms Collectors Association, Collector Arms Dealers Association, Remington Society of America, Texas Gun Collectors Association, Indian Territory Gun Collectors Association, Parker Gun Collectors Association.

Past leadership positions in other professional and service organizations

- Kansas Chamber of Commerce and Industry — Board of Directors, late 1980s.
- Kansas Contractors Association — Chairman of Accident Prevention and Crime Prevention Committee, 1988-89; Legislative Committee, 1986-1991.
- Oklahoma Turnpike Authority Contractor of the Year, United Construction Co. Inc., 1990
- AGC of America Advanced Management Program, class of 1986.
- Leadership Kansas, Class of 1985.
- Associated General Contractors of America — Served on national committees for Marketing, Crime Prevention, Insurance, Open Shop, and Closely Held Business, 1980s.

- Nominated for Kansas State Representative, 43rd District, 1978.
- Board member, community service organizations in Lawrence, KS, 1975-1978:
 - o United Way, Volunteer Clearinghouse, Douglas County Rape Victim Support Service, Headstart, Kansas Association of Drug Counselors

Professional and other memberships, current or past — Collector Arms Dealers Association, National Auctioneer Association, Kansas Auctioneer Association, Kansas *Bar* Association, American *Bar* Association, Kansas Chamber of Commerce and Industry (Board of Directors), Kansas Contractors Association (Chairman of Crime Prevention Committee), Mensa, International Society for Philosophical Enquiry.